Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

4281.9
Ag83E

United States
Department of
Agriculture

Economic
Research
Service

ERS-666

Milk Processor-Distributors' Sales, Costs, and Margins, 1979

W. Webster Jones

Milk Processor-Distributors` Sales, Costs, and Margins, 1979, by W. Webster Jones. National Economics Division, Economic Research Service, U.S. Department of Agriculture. ERS-666.

ABSTRACT

Milk processor-distributors` 1979 pretax profits fell to 57 cents per hundredweight of raw material processed, 8 cents less than in 1978. Returns per hundredweight (cwt) rose by $2.24 (9.4 percent) but raw materials costs rose by $1.92 (13.7 percent) and operating expenses by 40 cents (7.3 percent). Greater employee productivity kept growth in wages per cwt processed to 25 percent in 1972-79, despite a 70-percent rise in hourly wages over the same period. These findings are based on audits of 30 fluid milk processor-distributors between 1972 and 1979.

Keywords: Milk processor-distributors, sales, costs, net margin, gross margin, operating costs, milk, cream, processing, procurement, ice cream, cottage cheese, labor, fringe benefits, home delivery, wholesale delivery, selling costs.

Washington, D.C. 20250

October 1981

CONTENTS

	Page
Summary	iv
Introduction	1
Sales Value	2
Raw Materials and Other Products	2
Gross Margin	3
Operating Cost	4
Net Margin	5
Trends in Labor Cost	5
Labor Cost by Function	5
Labor Cost by Size	6
Labor Cost per Sales Dollar	7
Labor Fringe Benefits	8
Tables	9
Appendix Tables	17

SUMMARY

Fluid milk processor-distributors earned 8 cents less in pretax profits on every hundredweight (cwt) of raw material processed (RMP) in 1979 than they did in 1978. Although net sales in 1979 climbed by $2.24 per cwt, raw materials costs increased by $1.92 and operating costs rose by 40 cents per cwt. This study reports on other aspects of the economic health of the dairy industry, based on audits of 30 fluid milk processor-distributors between 1972 and 1979.

Raw materials costs (costs for milk, cream, finished products, and other ingredients used in processing) of the 30 processor-distributors totaled $15.96 per cwt of RMP. This was $1.92 more than in 1978 and included $1.60 for milk and cream, 28 cents for finished products, and 4 cents for other ingredients.

Net sales value, which generally follows increases in raw materials costs, went to $23.82 per cwt RMP in 1979, up $2.24 from 1978. This was the largest annual increase since the $2.54 jump in 1974.

Operating costs for the 30 processors totaled $7.29 per cwt RMP in 1979, up 40 cents from 1978. Leading the cost increases were: containers, up 12 cents (8.9 percent); rent, depreciation, and repairs, up 10 cents (11.2 percent); operating supplies, up 7 cents (17.1 percent); labor, up 7 cents (2.2 percent); and services, up 5 cents (21.7 percent). Partly offsetting these cost increases was a 5-cent drop in costs of advertising and general expenses.

Gross margin for the 30 processors was $7.86 per cwt RMP in 1979, up 32 cents from 1978. This increase in the gross margin was less than that needed to meet increased operating costs in 1979 and the net margin dropped to 57 cents, 8 cents below 1978.

Greater employee productivity and a reduction in retailing operations allowed the processor-distributors to hold rises in labor costs to 25 percent per cwt of RMP between 1972 and 1979, despite a 70-percent rise in hourly wages. Labor costs for in-plant processing and handling gained in relative importance and in 1979 accounted for 30.2 percent of total labor costs, up 27.1 percent from 1972. Delivery and selling labor dropped to 56.8 percent of the total, down 9.3 percent from 1972. General and administrative labor was relatively stable--around 12.4 percent in both 1979 and 1972.

Labor fringe benefits cost the processors 48 cents per cwt RMP in 1979, 84.6 percent more than in 1972. The cost of fringe benefits increased at a faster rate than did total cost of wages, salaries, and commissions during the seventies and in 1979 amounted to 17 cents of each dollar paid in wages, salaries, and commissions.

Milk Processor-Distributors' Sales, Costs, and Margins, 1979

W. Webster Jones

INTRODUCTION

Some indications of the economic health of the dairy industry can be derived from the analysis here of 30 fluid milk processor-distributors--their cost of goods sold, gross margins, and net margins for 1979. A special study of labor costs for specific years is also included. These operators process and distribute fluid milk, ice cream, cottage cheese, and smaller quantities of other products.

The 30 processing-distributing firms earned 57 cents pretax profit per hundredweight (cwt) of raw materials processed (RMP) in 1979, 8 cents less than in 1978, despite a $2.24 per cwt increase in net sales. Higher raw materials costs absorbed almost 86 percent of the increase in net sales leaving less than that needed to fully meet cost increases for labor, containers, supplies, and other operating inputs.

This is the third of a series of reports on 30 fluid milk processing-distributing firms by the Economic Research Service, which has collected quarterly cost and sales data for 30 fluid milk processor-distributors since 1972. These data have been analyzed in: Milk Dealers Sales and Costs: A Trend Analysis, 1952-77 (ESCS-62) by Lasley, Jones, and Sitzman; and Milk Processor Sales, Costs, and Margins (ESCS-77) by Jones and Lasley. A private consulting firm furnished quarterly data for the 30-firm sample considered to be representative of moderate-size, single-plant fluid milk processor-distributors throughout the United States. Most of the firms have been clients of the consulting firm for several years and all use a uniform accounting system to develop their data. The plant sample contains no milk producer-dealers or plants operated by retail grocery chains.

The specific processor-distributors sampled sometimes varied from one quarter to another because of data problems or for other reasons. When one plant had to be removed, the

consulting firm attempted to substitute another similar plant but the changes made in some quarters significantly affected quarter-to-quarter comparisons. Thus, for quarterly comparisons, data were used for the 21 firms that appeared in all quarters of 1978 and 1979. Annual data comparisons were made using the 30-firm sample data. 1/

Total fluid volume of raw materials processed by the 30 plants in 1979 was 4.6 percent greater than the 1978 volume (appendix table 1). Volume processed per plant in 1979 averaged 89.26 million pounds of which 95.8 percent was milk and cream. Milk and cream processed increased 5 percent over 1978 but other materials (water for reconstitution, nonfat dry milk for fortification, materials for ice cream, etc.) declined by 4.6 percent.

SALES VALUE

Net sales for the 30 processors averaged $23.82 per cwt of raw materials processed in 1979, an increase of 10.4 percent over 1978 and the second straight substantial annual increase (table 1). Since 1972, net sales for the processors have risen 71.7 percent with most of the increase (57 percent) occurring in 1973-75, when processors were faced with escalating cost increases for raw milk and other materials, containers, and energy. These cost pressures, which the processors passed on to their customers in the form of higher prices, lessened in 1975 and net sales remained relatively stable until 1978.

The sources of income for the processors were chiefly from sales of fluid milk products with lesser amounts from ice cream, cottage cheese, sour cream, yogurt, orange drink, and other products. Thus, changes in net sales can be attributed not only to variations in the prices received but to changes in products in the sales mix.

First quarter sales in 1979 for the 21 processors were $24 per cwt RMP, $1.53 over fourth quarter 1978 sales (table 2). Sales per cwt increased in the next two quarters of 1979 to $25.23 in the third, then dropped slightly to $25.04 in the fourth quarter. Quarterly sales in 1979 averaged $2.65 higher than in 1978 with increases ranging from $3.06 in the first quarter to $2.47 in the second.

RAW MATERIALS AND OTHER PRODUCTS

Raw materials and other product costs averaged $15.96 per cwt RMP for the 30 processor-distributors in 1979, $1.92 more than in 1978 (table 1). This was the largest yearly increase since 1974, and included $1.60 for milk and cream, 28 cents for

1/ Quarterly data for the 30 plants are presented in appendix tables 1 and 2.

finished products, and 4 cents for other products (ingredients used in making ice cream, orange drink, and other products). The milk and cream cost of $12.28 in 1979 accounted for 76.9 percent of total cost, up 0.8 percentage point from 1978. Purchases of finished products for resale cost $2.51 (15.7 percent of total cost), down 0.2 percentage point from 1978. Cost of other materials used in processing was $1.17, down 0.7 percentage point to 7.3 percent of total cost.

Payments for raw materials and other products by the 30 processors in 1979 amounted to 67 cents of each dollar of net sales, 1.94 cents more than in 1978 and the highest since 1974 (table 3). The cost of milk and cream was 51.55 cents of each sales dollar, up 4.2 percent from 1978. Purchases of finished products for resale amounted to 10.54 cents of each sales dollar, about 2 percent above 1978. Cost of other materials used in processing was 4.91 cents of each sales dollar, down 6.3 percent from 1978.

Quarter-to-quarter variations in raw materials costs for the 21 processors were relatively minor in 1979 except for a 54-cent per cwt jump from the second to the third quarter (table 2). Despite the relatively minor overall changes, the variation from one quarter to another for each component cost (milk and cream, finished product, other) was often considerable. First quarter costs in 1979 were at a high of $2.25 above those of first quarter 1978, but the cost difference narrowed in the later quarters to 81.72 cents in the fourth quarter.

GROSS MARGIN

Gross margin represents the money left after payment for raw materials and other products and was used to pay for procurement, processing, administration, and distribution. The 30 processors had an average gross margin of $7.86 per cwt RMP in 1979, 32 cents more than for 1978; but that increase was 38 cents less than the 1978 increase over 1977 (table 1).

The gross margin in the first quarter of 1979 for the 21 processors was $7.92 per cwt RMP, 42 cents above the preceding quarter in 1978 (table 2). The margin continued to increase and in the third quarter was $8.53 but then dropped 17 cents in the fourth. Quarterly gross margins in 1979 were higher than in 1978 in all quarters by amounts ranging from 86 cents in the fourth quarter to 53 cents in the second. The smaller gains in the middle two quarters occurred as increases in sales failed to keep pace with higher costs for raw materials and other products.

OPERATING COST

Operating costs for the 30 processor-distributors included the costs of procuring, processing, packaging, handling, storing, selling, distributing, and general administration. The cost of performing these functions in 1979 accounted for 30.61 cents of each sales dollar, 1.32 cents less than in 1978. This is the second consecutive year that processors' operating costs per sales dollar dropped after three annual increases. Operating costs in 1979 accounted for 7.24 cents (19.1 percent) less of each sales dollar than it did in 1972. The relative decline in operating costs occurred largely because the increase in the cost of raw materials and other products was so much greater (3.68 times) than operating costs. Also, during the seventies, processors were able to hold down unit operating costs through productivity gains in processing and distribution. Some plant operating costs associated with milk procurement were shifted to milk suppliers, who in turn added it to the price that processors paid for milk.

The 1979 operating costs for the 30 processor-distributors was $7.29 per cwt RMP, up 40 cents from 1978 but 2 cents less than the 1978 increase over 1977 (table 1). Quarterly operating costs for the 21 processors were higher in all quarters of 1979 by amounts ranging from 55 cents in the first quarter to 77 cents in the third quarter (table 2).

Labor (wages, salaries, commissions) and packaging supplies are usually the two major operating cost inputs for processor-distributors. In 1979, cost per cwt RMP for the 30 firms was $3.32 for labor, up 7 cents from 1978, and $1.47 for packaging supplies, up 12 cents (table 1). The 12-cent increase for packaging is the largest since the 26-cent jump in 1975.

The costs for rent, depreciation, and repairs, associated with plant, trucks, and other facilities, totaled 99 cents per cwt RMP, 10 cents more than in 1978 (table 1). This is the first cost per cwt increase since the 11-cent rise in 1975.

The cost of taxes and insurance in 1979 rose to 20 cents per cwt RMP, 1 cent over 1978 (table 1). The cost of personal property taxes, sales, city, licenses, and other taxes remained the same, while the cost of various types of insurance rose 1 cent.

Other items included in operating costs are operating supplies, services, energy (electricity, gas, fuel oil), advertising, and other general expenses (table 1). These costs per cwt RMP totaled $1.31 for the 30 firms in 1979, 10 cents more than in 1978. Cost changes for the individual items were: operating supplies, up 7 cents; services, up 6 cents; energy, up 1 cent; advertising, down 1 cent; and general expense items, down 3 cents.

NET MARGIN

Net margin represents the dollars (if any) left after meeting all expenses except State and Federal income taxes. 2/ In 1979, the 30 processors accumulated a net margin of $15.3 million, an average of 57 cents per cwt RMP, down 12.3 percent from 1978 (table 1). Quarterly net margins for the 21 processors increased throughout 1979, and in the fourth quarter was 29 cents more than in the first. The 1979 first quarter net margin was 26 cents above first quarter 1978, but in the second and third quarters, gains in gross margins were more than offset by operating cost increases and net margins dropped below 1978 quarters (table 2). In the fourth quarter of 1979, the net margin moved 21 cents above 1978; but that was due more to an extraordinary 29-cent decline in the net margin in the fourth quarter of 1978, rather than a substantial gain in 1979.

TRENDS IN LABOR COSTS

Although the industry-wide hourly earnings rate for labor in fluid milk plants was $6.51 in 1979, about 70 percent above the 1972 rate, labor cost per cwt RMP for the 30 processors sampled was $3.31, only 24.9 percent higher than in 1972 (table 4). 3/ Probably the most important factor moderating increases in unit labor costs during this time was the increasing amount of milk, cream, and other materials processed, which produced economies of scale. Two other adjustments that helped processors hold down their unit labor cost were the continuing shift from home delivery of milk to the less labor-intensive wholesale delivery and the increased use of labor-saving technology.

Labor Cost by Function

During the seventies, processors underwent a considerable shift in their use of labor--labor in procurement and distribution declined in importance, labor in processing and handling went up in importance, while general and administrative labor stayed about the same (table 5).

Procurement labor for the 30 processors averaged 2 cents per cwt RMP in 1979, down 1 cent from 1972 (table 4). That decline means that procurement labor dropped from 1.1 percent of total labor cost in 1972 to 0.6 percent in 1979 (table 5). Procurement labor cost for the processors was only a minor part of the total labor required to perform this function. Only a few of the 30 processors had field representatives or drivers who hauled milk from farms to the plants. Most of the cost of

2/ The net margin could be negative if income fails to cover expenses.

3/ Industry hourly rate published by Bureau of Labor Statistics, U.S. Department of Labor. Labor cost for sample plants includes wages, salaries, commissions, and fringe benefits.

this function was borne by milk producers through membership with cooperatives, which provide field services and either haul members' milk to market or coordinate the hauling through contracts with haulers.

Labor used in processing and handling cost the 30 processors $1 per cwt RMP in 1979, about 59 percent more than in 1972 (table 4). Processing and handling labor made up about 30.2 percent of total labor costs in 1979, about 6.4 percentage points more than in 1972 (table 5). Some significant changes occurred in processing and handling labor within the sample: glass bottling was discontinued; plastic bottling, up 700 percent; bulk and dispenser, up 100 percent; and paper bottling, up 62 percent.

Labor used in delivering and selling cost $1.88 per cwt RMP in 1979, about 13 percent more than in 1972 (table 4). This includes all products: milk, cream, cottage cheese, frozen products, and all nondairy products.

Labor costs for delivering and selling milk and other refrigerated dairy and nondairy products averaged $1.74 per cwt RMP in 1979, 28 cents more than in 1972 (table 4). This 19-percent increase was 6 percentage points below the rise in total labor cost, thus causing milk delivery and selling to drop 4.5 percent in importance. The decline occurred as output per dollar of distribution labor increased at a faster rate than did output per dollar of labor in processing and handling and in general and administration.

General and administrative (G&A) labor cost 41 cents per cwt RMP for the 30 plants in 1979, 8 cents more than in 1972. The relative importance of G&A to total labor was 12.4 percent, about the same as in 1972 (table 5).

Labor Cost by Size

Labor cost data for 1972 and 1979 for the 30 processor-distributors were arranged into four size groups according to the volume of raw materials processed so that certain unit costs could be calculated (table 6). Group 1 plants (the smallest plants) had the highest labor cost per cwt RMP in 1972 and in 1979. Cost differences in 1972 between group 1 and the plants in the other three groups ranged from 36 cents (group 2) to $1.22 (group 4) and in 1979 from 50 cents (group 4) to 69 cents (group 2). The major factors causing these differences in cost were milk delivering and selling in 1972 and general processing and handling in 1979.

In 1979, the 30 processor-distributors processed about 30 pounds of raw materials for each dollar spent on labor, about 8 pounds (20.9 percent) less than for 1972. This drop in volume

processed per dollar of labor came about as total labor cost during the seventies increased at a faster rate than did volume of raw materials for processing. Group 1 plants, with higher labor cost per cwt, processed the least volume of raw materials per labor dollar.

Plant processing and handling labor costs for group 1 plants averaged $1.46 per cwt RMP in 1979, 72 cents more than in 1972 despite a 21-percent increase in volume of raw materials processed (table 6). 4/ Group 3 plants had processing and handling costs of $1.03 in 1979, an increase of 50 cents. Group 4 had labor costs of 95 cents, the lowest, but only 1 cent less than group 2. Labor costs for these two groups in 1979 were 33 and 25 cents, respectively, above 1972.

Generally, labor costs per cwt RMP for milk delivery and selling were lower for the larger plants (table 6). In 1972, milk delivery and selling costs for group 4 were 83 cents less than for group 1. A similar cost pattern occurred in 1979 for the first three groups, but group 4 costs were 11 cents greater than group 1 because of higher wholesale labor costs. The cost differences between group 1 and the other groups were much smaller in 1979 than in 1972 as group 1 plants apparently had shifted more from retail sales to wholesale sales.

Labor costs per cwt RMP for delivering and selling ice cream in 1979 increased with plant size varying from 3 cents for group 1 plants to 14 cents for group 4 plants (table 6). Group 1 plants used relatively more labor in selling and delivering ice cream in 1972: their costs were 8 cents, only 3 cents less than groups 2 and 3, and 1 cent more than group 4.

General and administrative labor costs per cwt RMP were generally smaller for the larger plants (table 6). In 1979, G&A dropped 18 cents per cwt from group 1 to group 4.

Labor Cost Per Sales Dollar

Labor cost for the 30 processors accounted for 13.94 cents of each dollar of net sales in 1979, 5.02 cents or 26.5 percent below 1972 (table 3). The share of the sales dollar used to pay for other operating expenses also dropped but not nearly as much as for labor. In contrast, the share of each sales dollar used to pay for raw materials and other products went up and in 1979 was almost 10 percent more than in 1972.

4/ Discretion is advised when comparing 1972 with 1979 data since only one-third of the processors in the 1979 sample were in the 1972 sample.

Labor Fringe Benefits

Fringe benefits charged to labor by the 30 processors included State and Federal unemployment, Federal old age, workers' compensation, and other insurance. In 1979, tax and insurance benefits to labor amounted to 48 cents per cwt RMP, 22 cents more than in 1972, an annual increase of 14.3 percent (table 7). These benefits accounted for 71.1 percent of the total cost of all taxes and insurance in 1979, compared with 62.1 percent in 1972.

An analysis was made of fringe benefit costs with the 30 processors arranged into four groups according to the amount each plant paid in wages, salaries, and commissions (WS&C). For each dollar paid in WS&C in 1979, the processors paid an additional 17.05 cents in fringe benefits. This is 6.55 cents more than in 1972, an annual increase of 0.94 cent (14.9 percent). Fringe benefit costs per dollar of WS&C were generally higher for the larger plants (table 8). In 1972, fringe benefit costs for groups 2 and 3 were 20.9 percent and 31.5 percent higher than for group 1. In 1979, the differences in fringe benefit costs among the groups narrowed and group 3 costs were only 13.9 percent above that of group 1. Group 4 costs dropped, however, and were 15.6 percent below that of group 1.

Table 1--Net sales, costs, and margins for 30 fluid milk processor-distributors

Account	1972	1973	1974	1975	1976	1977	1978	1979
	Dollars per cwt of volume processed							
Net sales receipts 1/	13.87	14.29	17.35	19.54	19.85	19.83	21.58	23.82
Raw materials and other product costs:								
Milk and cream	6.49	7.24	9.29	9.81	10.26	10.15	10.68	12.28
Finished products	1.39	1.30	1.53	1.68	1.66	1.94	2.23	2.51
Other 2/	.57	.59	.85	1.05	.93	.90	1.13	1.17
Total	8.45	9.13	11.67	12.54	12.85	12.99	14.04	15.96
Gross margin	5.42	5.16	5.68	7.00	7.00	6.84	7.54	7.86
Operating costs:								
Salaries, wages, and commissions 3/	2.63	2.46	2.59	2.93	3.00	2.97	3.25	3.32
Containers	.81	.81	1.01	1.27	1.28	1.29	1.35	1.47
Operating supplies	.32	.30	.33	.40	.42	.36	.41	.48
Rent, depreciation, and repairs	.74	.68	.79	.90	.90	.90	.89	.99
Energy 4/	--	--	--	--	--	.23	.22	.24
Taxes	.08	.08	.09	.09	.10	.10	.14	.11
Insurance	.10	.07	.05	.06	.05	.07	.08	.09
Services	.24	.22	.24	.29	.30	.20	.22	.28
Advertising	.16	.13	.14	.15	.16	.15	.14	.13
General	.17	.14	.16	.18	.19	.20	.21	.18
Total	5.25	4.89	5.40	6.27	6.40	6.47	6.89	7.29
Net margin 5/	.17	.27	.28	.73	.60	.37	.65	.57

-- = Not estimated. 1/ Gross sales receipts less discounts, allowances, and damaged product returns. 2/ Ingredients other than milk, cream, and skim milk used to make cottage cheese, ice cream, orangeade, and other products. 3/ Includes cost of fringe benefits, such as State and Federal unemployment, Federal old age benefits, workers' compensation, and pensions. 4/ Included in operating supplies and services prior to 1977. 5/ Net returns to owners before income tax.

Table 2--Fluid volume processed and net sales, costs, and margins for 21 fluid milk processor-distributors

Account	1978 quarters				1979 quarters				1978	1979
	First	Second	Third	Fourth	First	Second	Third	Fourth		
	Million pounds per plant									
Fluid volume processed:										
Milk and cream	20.00	19.77	20.15	20.89	21.29	20.56	20.99	22.35	80.80	85.20
Other 1/	.75	1.18	1.20	.99	.78	1.17	1.18	1.03	4.11	4.15
Total	20.75	20.95	21.35	21.88	22.07	21.73	22.17	23.38	84.91	89.35
	Dollars per cwt of volume processed									
Net sales receipts 2/	20.94	21.91	22.72	22.47	24.00	24.38	25.23	25.04	22.02	24.67
Raw materials and other product costs:										
Milk and cream	10.40	10.21	10.72	11.40	12.38	12.01	12.58	13.01	10.69	12.50
Finished products	2.42	2.75	2.84	2.39	2.60	2.79	2.81	2.58	2.60	2.69
Other 3/	1.01	1.26	1.29	1.18	1.10	1.36	1.31	1.10	1.18	1.21
Total	13.83	14.22	14.85	14.97	16.08	16.16	16.70	16.69	14.47	16.40
Gross margin	7.11	7.69	7.87	7.50	7.92	8.22	8.53	8.35	7.55	8.27
Operating costs:										
Salaries, wages, and commissions 4/	3.23	3.26	3.29	3.25	3.40	3.56	3.57	3.40	3.26	3.48
Containers	1.35	1.39	1.39	1.36	1.43	1.51	1.52	1.52	1.37	1.50
Operating supplies	.41	.40	.43	.43	.47	.50	.56	.57	.42	.52
Repairs	.29	.28	.31	.29	.34	.36	.39	.35	.29	.36
Taxes	.11	.12	.10	.10	.12	.11	.11	.09	.11	.11
Insurance	.09	.09	.08	.08	.11	.11	.09	.08	.08	.10
Depreciation	.33	.34	.35	.33	.37	.37	.37	.38	.34	.37
Rental and royalty	.24	.26	.28	.28	.30	.29	.30	.30	.27	.30
Energy	.22	.23	.25	.21	.23	.24	.24	.22	.23	.23
Services	.26	.17	.18	.21	.21	.28	.29	.28	.20	.27
Advertising	.15	.15	.15	.15	.16	.15	.16	.15	.15	.15
General	.17	.21	.17	.19	.24	.15	.13	.18	.19	.18
Total 5/	6.84	6.91	6.97	6.89	7.39	7.62	7.74	7.53	6.91	7.57
Net margin 6/	.27	.78	.90	.61	.53	.61	.79	.82	.64	.70

1/ Other includes water, nonfat dry milk, orangeade base, and other products. 2/ Gross sales receipts less discount allowances, and damaged product return. 3/ Ingredients other than milk and cream used to make cottage cheese, ice cream, orangeade,and other products. 4/ Includes cost of such labor benefits as State and Federal unemployment, Federal old age, workers' compensation, and pensions. 5/ May not total due to rounding. 6/ Net returns to firms before income taxes.

Table 3--Costs per dollar of net sales for 30 fluid milk processor-distributors

Account	1972	1973	1974	1975	1976	1977	1978	1979
				Cents				
Raw materials and other product costs:								
Milk and cream	46.79	50.66	53.54	50.20	51.69	51.19	49.49	51.55
Finished products	10.02	9.10	8.82	8.60	8.36	9.78	10.33	10.54
Other 1/	4.11	4.13	4.90	5.37	4.69	4.54	5.24	4.91
Total 2/	60.92	63.89	67.26	64.17	64.74	65.51	65.06	67.00
Gross margin	39.08	36.11	32.74	35.82	35.26	34.49	34.94	33.00
Operating costs:								
Salaries, wages, and commissions 3/	18.96	17.21	14.93	14.99	15.11	14.98	15.06	13.94
Containers	5.84	5.67	5.82	6.50	6.45	6.51	6.26	6.17
Operating supplies	2.31	2.10	1.90	2.05	2.12	1.82	1.90	2.01
Rent, depreciation, and repairs	5.34	4.76	4.55	4.61	4.53	4.54	4.12	4.15
Energy	--	--	--	--	--	1.16	1.07	1.01
Taxes	.58	.56	.52	.46	.50	.50	.51	.46
Insurance	.72	.49	.29	.31	.25	.35	.37	.38
Services	1.73	1.54	1.38	1.48	1.51	1.01	1.02	1.18
Advertising	1.15	.91	.81	.77	.81	.76	.65	.55
General	1.23	.98	.92	.92	.96	1.01	.97	.76
Total 2/	37.85	34.22	31.12	32.09	32.24	32.63	31.93	30.61
Net margin 4/	1.23	1.89	1.62	3.73	3.02	1.86	3.01	2.39

-- = Not estimated.

1/ Ingredients other than milk and cream used to make cottage cheese, ice cream, and other products.

2/ May not total due to rounding.

3/ Includes cost of fringe benefits, such as State and Federal unemployment, Federal old age, workers' compensation, and pensions.

4/ Net returns before income tax.

Table 4--Labor costs per volume of raw materials processed, 30 milk processor-distributors 1/

Cost item	1972	1976	1977	1978	1979
		Million pounds per plant			
Raw materials processed 2/	59.87	73.37	86.05	85.36	89.26
		Dollars per cwt			
Procurement	.03	.02	.02	.02	.02
Plant processing and handling: 3/					
General processing	.17	.19	.20	.21	.25
Glass handling	.02	0	0	0	0
Paper handling	.21	.26	.30	.32	.34
Plastic handling	.02	.09	.11	.13	.16
Bulk and dispenser handling	.02	.03	.02	.04	.04
Cottage cheese 4/	.05	.05	.05	.06	.06
Ice cream 5/	.12	.14	.11	.15	.15
Other	.02	6/	6/	6/	6/
Total 7/	.63	.75	.81	.91	1.00
Milk delivering and selling: 3/					
Retail routes	.59	.29	.23	.29	.22
Wholesale routes	.78	1.24	1.34	1.40	1.45
Other	.09	.12	.07	.06	.07
Total	1.46	1.65	1.64	1.75	1.74
Ice cream delivering and selling	.09	.13	.09	.11	.10
Other delivering and selling	.11	.04	.05	.06	.04
Administration	.33	.38	.35	.40	.41
Grand total 7/	2.65	2.97	2.96	3.25	3.31

1/ Labor cost includes wages, salaries, commissions, bonuses, and fringe benefits. 2/ Milk, cream, and other materials. 3/ Also includes labor used to handle finished products purchased for resale. 4/ Includes manufacturing, packaging, and handling. 5/ Includes mix manufacture, freezing, packaging, and handling. 6/ Less than $0.005. 7/ May not total due to rounding. These totals may differ somewhat from those in table 1 because of differences in accounting for fringe benefits.

Table 5--Labor functions as a percent of total labor cost, 30 milk processor-distributors

Cost item	1972	1976	1977	1978	1979
			Percent		
Total labor 1/	100.0	100.0	100.0	100.0	100.0
Procurement	1.1	.7	.7	.6	.6
Plant processing and handling:					
General processing	6.4	6.4	6.8	6.5	7.6
Glass handling	.8	0	0	0	0
Paper handling	7.9	8.8	10.1	9.8	10.3
Plastic handling	.8	3.0	3.7	4.0	4.8
Bulk and dispenser handling	.8	1.0	.7	1.2	1.2
Cottage cheese 2/	1.9	1.7	1.7	1.8	1.8
Ice cream 3/	4.5	4.7	3.7	4.6	4.5
Other	.8	4/	4/	4/	4/
Total 1/	23.8	25.3	27.4	28.0	30.2
Milk delivering and selling:					
Retail routes	22.3	9.8	7.8	8.9	6.6
Wholesale routes	29.4	41.8	45.3	43.1	43.8
Other	3.4	4.0	2.4	1.8	2.1
Total 1/	55.1	55.6	55.4	53.8	52.6
Ice cream delivering and selling	3.4	4.4	3.0	3.4	3.0
Other delivering and selling	4.2	1.3	1.7	1.9	1.2
General and administrative	12.5	12.8	11.8	12.3	12.4

1/ May not total due to rounding.
2/ Includes manufacturing, packaging, and handling.
3/ Includes mix manufacture, freezing, packaging, and handling.
4/ Less than 0.05 percent.

Table 6--Labor cost per function by size, 30 milk processor-distributors (pounds processed per quarter) 1/

Cost item	1972				1979			
	Group 1 (Less than 10 million)	Group 2 (10-19 million)	Group 3 (20-29 million)	Group 4 (30 million and over)	Group 1 (Less than 10 million)	Group 2 (10-19 million)	Group 3 (20-29 million)	Group 4 (30 million and over)
Number of plants	12	9	6	3	7	8	9	6
Pounds of raw materials processed per dollar of labor 2/	31.77	36.62	35.82	51.73	25.96	31.61	30.20	29.86
	Dollars per cwt							
Total labor 3/	3.15	2.73	2.79	1.93	3.85	3.16	3.31	3.35
Procurement	.02	.02	.04	.01	.05	.01	.04	0
Plant processing and handling:								
General processing	.23	.18	.14	.16	.53	.24	.28	.19
Glass handling	.07	.02	.01	4/	--	--	--	--
Paper handling	.25	.26	.15	.24	.52	.41	.30	.33
Plastic handling	4/	.01	.03	.03	.18	.15	.15	.16
Bulk & dispenser handling	.05	.02	.01	.04	.04	.05	.03	.04
Cottage cheese 5/	.05	.06	.04	.05	.05	.04	.07	.07
Ice cream 6/	.08	.14	.14	.10	.14	.08	.20	.16
Other	4/	.01	.01	0	0	0	4/	4/
Total 7/	.74	.71	.53	.62	1.46	.96	1.03	.95
Milk delivering and selling:								
Retail routes	1.17	.46	.48	.44	.16	.09	.30	.20
Wholesale routes	.60	1.00	.92	.46	1.49	1.57	1.25	1.59
Other	.06	.07	.11	.11	.14	.01	.08	.10
Total 7/	1.83	1.53	1.51	1.00	1.79	1.67	1.63	1.90
Ice cream delivering and selling	.08	.11	.11	.07	.03	.04	.10	.14
Other delivering and selling	.01	.03	.24	.03	0	0	.06	.02
General and administrative	.47	.32	.36	.20	.52	.48	.45	.34

-- = Not estimated. 1/ Labor cost includes wages, salaries, commissions, and fringe benefits. 2/ Milk, cream, and other materials. 3/ Includes labor used in handling products purchased for resale. 4/ Less than $0.005. 5/ Includes manufacture, packaging, and handling. 6/ Includes mix manufacture, freezing, packaging, and handling. 7/ May not total due to rounding.

Table 7--Labor costs, including wages, salaries and commissions, and fringe benefits, 30 processor-distributors

Item	1972	1976	1977	1978	1979
			Dollars		
Labor cost per cwt RMP:					
Wages, salaries, commissions	2.39	2.63	2.59	2.79	2.83
Fringe benefits 1/	.26	.34	.37	.46	.48
Total	2.65	2.97	2.96	3.25	3.31
			Percent		
Percent fringe benefits are of:					
Total taxes and insurance 2/	62.1	66.7	68.1	71.8	71.1
Wages, salaries, commissions	10.9	12.9	14.3	16.5	17.0
Total labor cost 3/	9.8	11.4	12.5	14.2	14.5

1/ Includes unemployment insurance (State and Federal), Federal old age, workers' compensation, other employee insurance benefits, pensions.

2/ Includes all taxes and insurance on buildings and plant equipment, automobiles and trucks, State sales and city taxes, licenses, public liability insurance, and miscellaneous plus cost of fringe benefits to labor.

3/ Includes fringe benefits.

Table 8--Labor cost distribution by payroll size: 30 processor-distributors 1/

Item	Group 1 (Less than $1.0 mil.)	Group 2 ($1.0-$1.9 million)	Group 3 ($2.0-$3.9 million)	Group 4 ($4 million and over)	Total
			Number of plants		
1972	11	12	7	--	30
1979	6	10	10	4	30
			Dollars per quarter		
Labor cost per plant:					
Wages, salaries, commissions:					
1972	128,211	356,624	703,329	--	353,770
1979	179,941	389,165	750,242	1,620,627	631,874
Fringe benefits: 2/					
1972	10,937	36,764	78,925	--	37,132
1979	29,849	72,644	141,782	227,130	107,729
Total labor:					
1972	139,148	393,388	782,254	--	390,902
1979	209,790	461,809	892,024	1,847,757	739,603
			Cents per dollar		
Fringe benefits per dollar of wages, salaries, and commissions:					
1972	8.53	10.31	11.22	--	10.50
1979	16.59	18.67	18.90	14.01	17.05

-- = Not estimated.

1/ Size-groupings made on basis of wages, salaries, and commissions.

2/ Includes State and Federal unemployment, Federal old age, workers' compensation, and pensions.

Appendix table 1--Fluid volume processed, net sales, costs, and margins for 30 fluid milk processor-distributors

Account	1978 quarters				1979 quarters				1978	1979
	First	Second	Third	Fourth	First	Second	Third	Fourth		
	Million pounds per plant									
Fluid volume processed:										
Milk and cream	21.62	19.57	20.17	20.05	20.34	21.52	21.08	22.55	81.41	85.49
Other 1/	.92	1.08	1.13	.82	.64	1.09	1.14	.90	3.95	3.77
Total	22.54	20.65	21.30	20.87	20.98	22.61	22.22	23.45	85.36	89.26
	Dollars per cwt volume processed									
Net sales receipts	20.19	21.87	22.44	21.92	23.16	23.34	24.42	24.29	21.58	23.82
Raw materials and other product costs:										
Milk and cream	10.30	10.37	10.75	11.34	12.17	11.93	12.25	12.73	10.68	12.28
Finished products	2.02	2.35	2.39	2.19	2.33	2.51	2.72	2.49	2.23	2.51
Other 1/	.99	1.21	1.23	1.08	1.02	1.26	1.31	1.06	1.13	1.17
Total	13.31	13.93	14.37	14.61	15.52	15.70	16.28	16.28	14.04	15.96
Gross margin	6.88	7.94	8.07	7.31	7.64	7.64	8.14	8.01	7.54	7.86
Operating costs:										
Salaries, wages, and commissions 2/	3.07	3.39	3.41	3.14	3.31	3.31	3.42	3.25	3.25	3.32
Containers	1.29	1.38	1.38	1.35	1.38	1.45	1.51	1.54	1.35	1.47
Operating supplies	.38	.41	.43	.41	.45	.44	.51	.52	.41	.48
Repairs	.29	.30	.33	.29	.36	.35	.40	.36	.30	.37
Taxes	.11	.12	.11	.09	.13	.11	.11	.09	.11	.11
Insurance	.08	.08	.08	.08	.10	.10	.08	.08	.08	.09
Depreciation	.33	.33	.33	.32	.35	.35	.36	.36	.33	.36
Rental and royalty	.25	.26	.27	.26	.26	.24	.27	.26	.26	.26
Services	.20	.23	.23	.24	.23	.30	.29	.29	.22	.28
Energy	.22	.23	.25	.22	.24	.25	.25	.23	.23	.24
Advertising	.14	.16	.15	.14	.14	.13	.14	.13	.14	.13
General expenses	.22	.23	.20	.18	.22	.15	.16	.18	.21	.18
Total	6.58	7.12	7.17	6.72	7.17	7.18	7.50	7.29	6.89	7.29
Net margin 3/	.30	.82	.90	.59	.47	.46	.64	.72	.65	.57

1/ Ingredients other than milk, cream, and skim milk used in ice cream, orangeade, and other products.
2/ Includes fringe benefits.
3/ Net returns to owners before income taxes.

Appendix table 2--Cost per dollar of net sales for 30 fluid milk processor-distributors

Account	1978 quarters				1979 quarters				1978	1979
	First	Second	Third	Fourth	First	Second	Third	Fourth		
	Cents									
Raw materials and other product costs:										
Milk and cream	51.02	47.42	47.91	51.73	52.55	51.11	50.16	52.41	49.49	51.55
Finished products	10.00	10.74	10.65	9.99	10.06	10.76	11.14	10.25	10.33	10.54
Other	4.90	5.53	5.48	4.93	4.40	5.40	5.37	4.36	5.24	4.91
Total	65.92	63.69	64.04	66.65	67.01	67.27	66.67	67.02	65.06	67.00
Gross margin	34.08	36.31	35.96	33.35	32.99	32.73	33.33	32.98	34.94	33.00
Operating costs:										
Salaries, wages, and commissions	15.21	15.50	15.20	14.33	14.29	14.18	14.00	13.38	15.06	13.94
Containers	6.39	6.31	6.15	6.16	5.96	6.21	6.18	6.34	6.26	6.17
Operating supplies	1.88	1.87	1.92	1.87	1.94	1.88	2.09	2.14	1.90	2.02
Repairs	1.44	1.37	1.47	1.32	1.56	1.50	1.64	1.48	1.39	1.55
Taxes	.54	.55	.49	.41	.56	.47	.45	.37	.51	.46
Insurance	.40	.37	.36	.37	.43	.43	.33	.33	.37	.38
Depreciation	1.63	1.51	1.47	1.46	1.51	1.50	1.47	1.48	1.53	1.51
Rental and royalty	1.24	1.19	1.20	1.19	1.12	1.03	1.11	1.07	1.20	1.09
Energy	.99	1.05	1.02	1.09	.99	1.29	1.19	1.19	1.02	1.18
Services	1.09	1.05	1.11	1.00	1.04	1.07	1.02	.95	1.07	1.01
Advertising	.69	.73	.67	.64	.61	.56	.57	.54	.65	.55
General	1.09	1.05	.89	.82	.95	.64	.66	.74	.97	.76
Total	32.59	32.55	31.95	30.66	30.96	30.76	30.71	30.01	31.93	30.61
Net margins	1.49	3.76	4.01	2.69	2.03	1.97	2.62	2.97	3.01	2.39

*U.S. GOVERNMENT PRINTING OFFICE : 1981 0-340-932/ESS/EMS-200

NATIONAL AGRICULTURAL LIBRARY
1022385491

UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C. 20250

POSTAGE AND FE
U.S. DEPARTME
AGRICULTURE
AGR 101
THIRD CLASS

NATIONAL AGRICULTURAL LIBRARY
1022385491
U.S.MAIL

Economic Research Service

The Economic Research Service carries out research on the production and marketing of major agricultural commodities; foreign agriculture and trade; economic use, conservation, and development of natural resources; trends in rural population, employment, and housing; rural economic adjustment problems; and performance of the U.S. agricultural industry. ERS provides objective and timely economic information to farmers, farm organization members, farm suppliers, marketers, processors, consumers, and others who make production, marketing, and purchasing decisions, and to legislators and other public officials at the Federal, State, and local government levels.